What is claimed is:

1. A collective substrate made of a ceramic and formed integrally of a plurality of insulative members arranged in spaced relation in the same plane of the substrate and each having opposite surfaces which respectively serve as a main surface for mounting a semiconductor element and an external connection surface for connection to a second-component, comprising:

a through-hole formed at least one of

a predetermined position

within respective regions defined as the insulative members, and

a position across a boundary between the each region and a region outside the region,

as extending thicknesswise of the insulative member, wherein

the through-hole has a single minimum size hole portion located at a position thicknesswise of the insulative member, and an interior surface tapered such that an opening size progressively decreases from openings of the through-hole in the main surface and in the external connection surface toward the minimum size hole portion.

2. A collective substrate as set forth in claim 1,

having a heat conductivity of not less than 10W/mK.

3. A collective substrate as set forth in claim 1, having a thermal expansion coefficient of not more than $10\times10^{-6}/°C$.

4. A collective substrate as set forth in claim 1, produced by firing a planar precursor sheet as a material for the collective substrate and then forming through-holes in the resulting substrate.

5. A collective substrate as set forth in claim 1, further comprising:

a semiconductor element mounting electrode layer provided on the main surface in each of the regions defined as the insulative members;

a second-component connection electrode layer provided on the external connection surface in each of the regions; and

an electrically conductive layer provided in the through-hole for connection between the electrode layer on the main surface and the electrode layer on the external connection surface.

6. A semiconductor element mount produced by cutting

a collective substrate as recited in claim 5 into individual regions.

7. A semiconductor element mount as set forth in claim 6, wherein

at least an outermost surface portion of the electrode layer on the external connection surface is composed of Au.

8. A semiconductor element mount as set forth in claim 6, comprising:

an insulative member having a semiconductor element mount region defined on a main surface thereof; and

a frame provided on the main surface of the insulative member as surrounding the semiconductor element mount region.

9. A semiconductor element mount as set forth in claim 8, wherein

the insulative member and the frame each have a thermal expansion coefficient of not more than $10\times10^{-6}/°C$, and

a difference in thermal expansion coefficient between the frame and the insulative member is not more

than $3\times10^{-6}/°C$.

10. A semiconductor element mount as set forth in claim 8, wherein

not less than 80% of the area of the semiconductor element mount region surrounded by the frame on the main surface of the insulative member is covered with a metal layer at least including the semiconductor element mounting electrode layer.

11. An imaging device comprising:

a semiconductor element mount as recited in claim 8;

an imaging element as a semiconductor element mounted in the region surrounded by the frame on the main surface of the insulative member of the semiconductor element mount; and

a cover of a transparent plate bonded to an upper surface of the frame for sealing an inside of the frame.

12. A semiconductor device comprising:

a semiconductor element mount as recited in claim 6; and

a semiconductor element mounted on the main surface of the insulative member of the semiconductor element

mount and sealed with a sealant.

13. A semiconductor device produced by mounting semiconductor elements in the regions defined as the insulative members on the main surface of the collective substrate recited in claim 5 with the through-holes of the collective substrate being closed thicknesswise of the collective substrate by filling the minimum size hole portions of the through-holes with an electrically conductive material for the electrically conductive layers, then sealing the entire main surface of the collective substrate mounted with the semiconductor elements with a sealant, and cutting the collective substrate together with the sealant into the individual regions, wherein

an insulative member cut out of the collective substrate has a through-hole at least partly exposed to a side face of the insulative member which intersects a main surface and an external connection surface of the insulative member.

14. A light emitting diode component comprising:

a semiconductor device as recited in claim 12 or 13, wherein

the semiconductor element is a light emitting

element, and

the sealant is at least one of a fluorescent material and a protective resin.

15. A light emitting diode component as set forth in claim 14, wherein

at least an outermost surface portion of the electrode layer on the main surface of the insulative member is composed of Ag, Al or an Al alloy.

16. A light emitting diode comprising:

a package having a recess;

a light emitting diode component as recited in claim 14 being mounted on a bottom surface of the recess of the package; and

a sealing cap or a lens composed of a material pervious to light emitted from the light emitting diode component and fitted in an opening of the recess for sealing the recess.